

Southern Plains Drought Outlook Summary

**Thursday, March 19, 2015
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National Weather Service

***Southern Region Headquarters
Regional Operations Center
Fort Worth, TX***

**Prepared by: Kurt Van Speybroeck/Victor Murphy/David Brown
817-978-1100 x 147**

Current Drought Situation

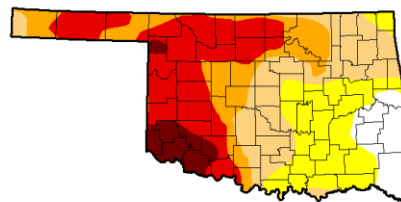
- Much of south, southeast, east, and far west TX are now drought free.
- Little change to the core drought areas in north TX, west OK, and the TX/OK panhandles.
- Severe drought covers approx. 48% of OK, 27% of TX, and 20% of NM.
- Three months ago, severe drought covered approx. 41% of OK, 23% of TX, and 29% of NM.

U.S. Drought Monitor Oklahoma

March 17, 2015
(Released Thursday, Mar. 19, 2015)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	8.63	91.37	70.50	47.81	31.72	5.75
Last Week 3/16/2015	2.17	97.83	70.50	47.81	28.29	5.75
3 Months Ago 12/16/2014	28.03	71.97	61.04	40.84	21.87	5.71
Start of Calendar Year 1/1/2015	25.63	74.37	62.03	40.84	21.74	5.70
Start of Water Year 9/30/2014	8.55	91.45	73.31	58.13	20.92	4.64
One Year Ago 3/16/2014	4.05	95.95	77.25	30.25	14.72	4.07



Intensity

D0 Abnormally Dry D1 Moderate Drought D2 Severe Drought D3 Extreme Drought D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Chris Fenimore
NCDC/NESDIS/NOAA



<http://droughtmonitor.unl.edu/>

For Southern Plains Drought Monitor go to:
<http://www.drought.gov/drought/regional-programs/southernplains/southern-plains-home>

Current/Ongoing Drought Impacts

- Critical reservoirs in southwest OK such as Lake Altus-Lugert are less than 10% of capacity.
- The main reservoir serving Wichita Falls is 19% full, the lowest since its impoundment in 1969. The city continues the re-use of wastewater.
- Statewide, Texas reservoirs have risen to 69%% full, nearly a 10% increase from 3 months ago. More improvements likely in the months ahead, as the El Nino impacts persist.
- Three of the four largest reservoirs in NM are at 18% or less of capacity, including the largest, Elephant Butte.

U.S. Drought Monitor New Mexico

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Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	12.81	87.19	72.76	10.94	0.00	0.00
Last Week 3/16/2015	12.81	87.19	67.62	10.94	0.00	0.00
3 Months Ago 12/16/2014	12.01	87.99	65.38	29.10	3.70	0.00
Start of Calendar Year 1/1/2015	12.01	87.99	65.38	29.10	3.70	0.00
Start of Water Year 9/30/2014	16.70	83.30	62.57	30.04	0.08	0.00
One Year Ago 3/16/2014	0.49	99.51	95.60	64.87	23.44	0.00

Intensity

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U.S. Drought Monitor Texas

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Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	43.46	56.54	39.93	27.12	14.48	2.97
Last Week 3/16/2015	42.15	57.85	41.05	25.69	12.76	2.97
3 Months Ago 12/16/2014	33.17	66.83	43.91	23.41	10.05	2.57
Start of Calendar Year 1/1/2015	34.37	65.63	44.68	25.73	11.70	3.17
Start of Water Year 9/30/2014	28.92	71.08	48.95	29.54	11.26	2.89
One Year Ago 3/16/2014	15.24	84.76	64.20	33.18	14.06	1.41

Intensity

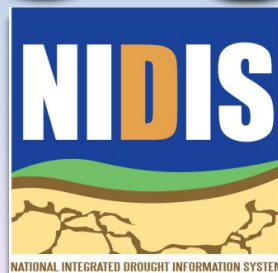
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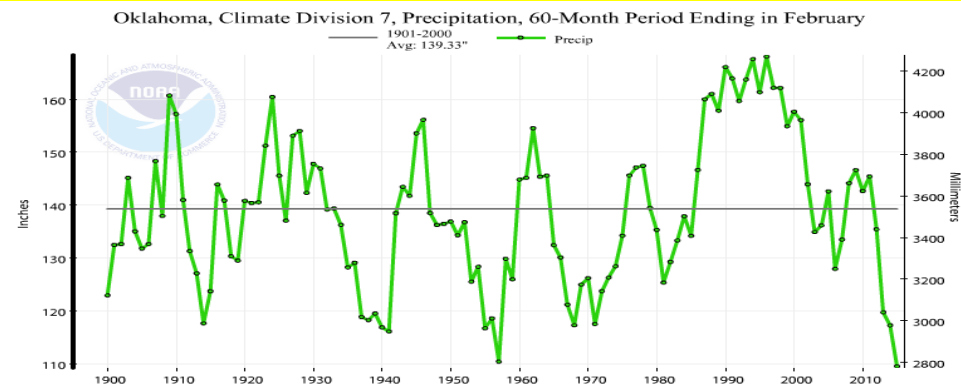
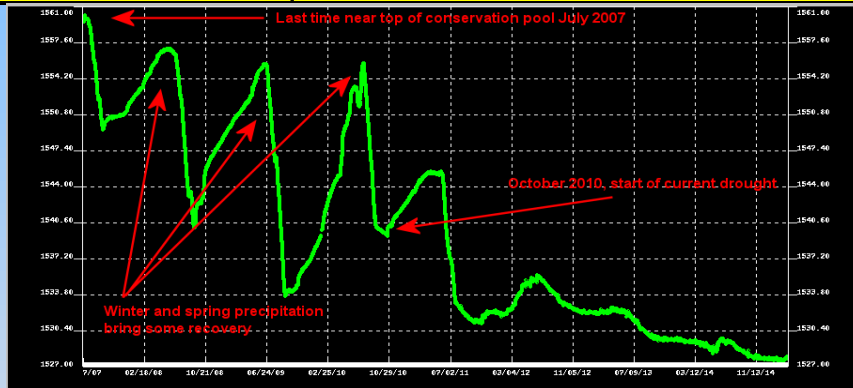
Portions of NM and TX Have Seen Short Term Drought Relief But Core Drought Areas in Texas and Oklahoma Remains

Many areas of all 3 states are now drought free. However, the core drought areas of OK and TX remain unchanged or have worsened.

- 43% of TX is drought free. The most since November 2010. There has been little change to the core exceptional drought areas near Childress, Abilene, and Wichita Falls. Recent heavy rains in northeast TX have significantly improved the water levels for reservoirs serving the DFW Metroplex. Reservoirs serving Dallas and Ft. Worth have each risen nearly 20% in the past 3 months to 76% and 74% full respectively.
- In contrast, only 9% of OK is drought free. 48% of OK remains in severe drought or worse, confined almost entirely west of I-35. Indicative of the long term nature of the drought, the climate division which covers southwest OK has seen only 109" of precipitation in the 5 year period ending February 2015, a deficit of 30". This is the driest 5 year period on record dating back to 1895. Average yearly precipitation is 28" (lower right graph). In this area is Lake Altus-Lugert. The lower left graph shows the water levels there since July 2007, when it was near 100% capacity. It is now at 9%.
- 13% of New Mexico is drought free, little changed from last month. However, there is no longer any extreme (D3) or exceptional (D4) drought in New Mexico for the first time since March 2011.

Some additional relief is hoped for

- Weak El Nino conditions are expected to continue through summer. Based mainly on this, the most recent seasonal rainfall outlook for the April through June favors above normal rain chances for all of New Mexico, all of south and western TX, and the OK panhandle. The remainder of Oklahoma and northeast TX are forecast to have equal chances of above, below, or near normal rainfall.



Drought Conditions (Percent Area) in D3-D4 (Extreme to Exceptional Drought)

State	Current	Last Week	3 Months Ago	1 Year Ago
Oklahoma	32%	28%	22%	15%
Texas	14%	13%	10%	14%
New Mexico	0%	0%	4%	23%

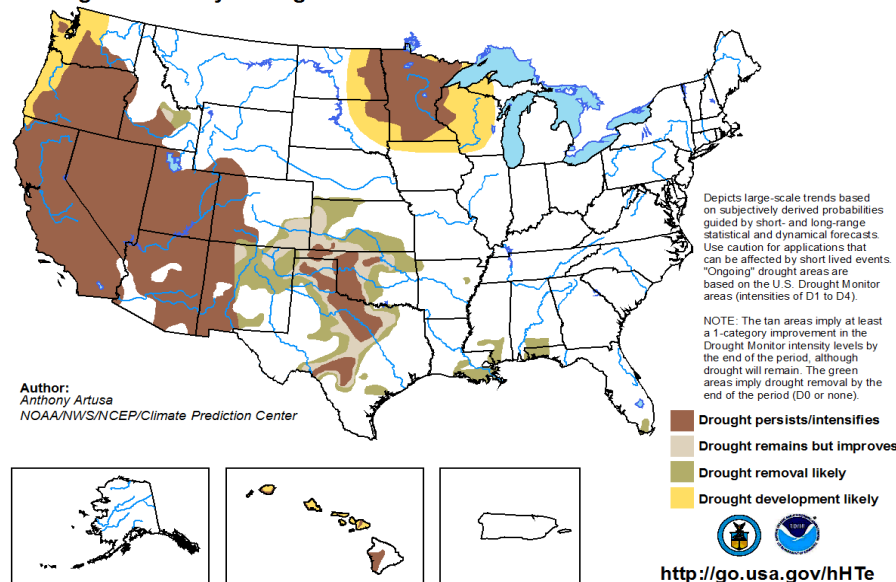


3-month Outlook Precipitation

- The likelihood of El Nino conditions persisting through summer is around 50%-60%.
- **Above normal precipitation is favored through June across all of NM and most of south and west TX and the OK/TX panhandles.**
- The latest Drought Outlook shows drought improving thru June across most of TX, OK, and NM, except for the core drought areas.

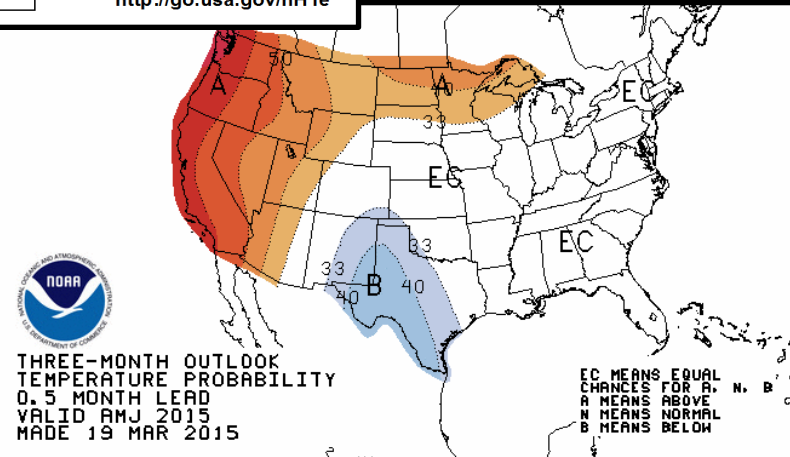
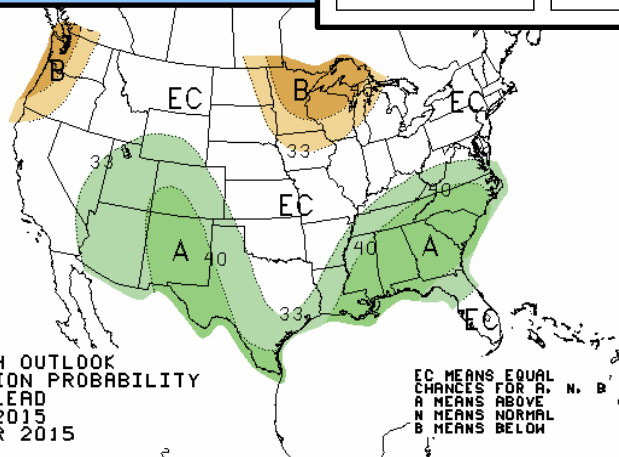
U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for March 19 - June 30, 2015
Released March 19, 2015



3-month Outlook Temperature

- **Below normal temperatures are favored for eastern NM and south and west TX and the OK/TX panhandles.**
- There is no strong seasonal forecast signal for the rest of NM/TX/OK.
- Increased chances for above normal rain should result in increased runoff, helping to fill area reservoirs.



Southern Plains Drought Summary

- Since January 1st, nearly all of TX and eastern New Mexico have seen above normal precipitation. This has resulted in some significant drought improvement.
- However, most of the core drought areas in western Oklahoma, north central Texas, and the Red River area were drier than normal, and have thus seen little to no drought improvement.
- El Nino conditions should persist through summer. This should result in increased chances for above normal precipitation across New Mexico, south and west Texas, and the TX/OK panhandles.

<http://www.drought.gov/drought/regional-programs/southernplains/southern-plains-home>

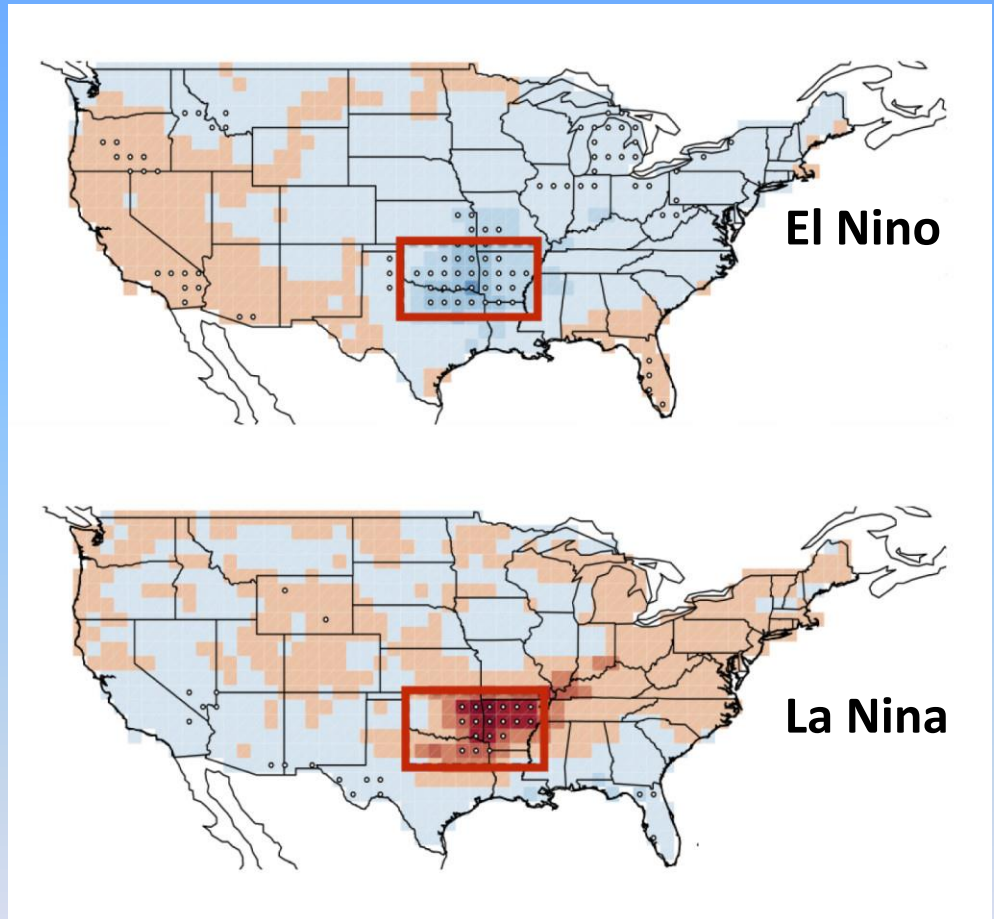
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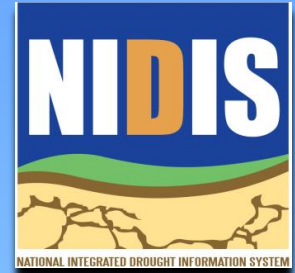
Could Spring El Nino Conditions Lead to a Decrease in Tornadoes?

- A new study shows that when El Nino conditions are moderate or strong, the frequency of spring tornadoes in the Southern Plains goes down (blue shading in the graph to the right showing statistically significant where stippled and strongest in the red box).
- In contrast, moderate or strong La Nina conditions are linked to above-average tornado occurrence in the region (red shading in bottom map to the right showing statistically significant where stippled and strongest in the red box).
- The current El Nino event is not currently forecast to reach moderate strength this spring; however, any potential intensification bears watching due to the potential severe weather season impact.
- Source: Allen et al (2015) Influence of the El Nino/Southern Oscillation on tornado and hail frequency in the United States. Nature Geoscience: DOI 10.1038/NGEO2385.





Information provided by:
National Weather Service
Southern Region Headquarters
Regional Operations Center
Fort Worth, TX



Phone: (817) 978-1100 x147
E-mail: sr-srh.roc@noaa.gov
Web: <http://www.srh.noaa.gov>

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